INTERNATIONAL FORM

The Oriental Scientific
Instruments, Import and Export
Corp. for Inst. of Microbiology
Academia Sinica
52 San-Li-He Rd.
Beijing, P.R. China

VIABILITY STATEMENT
issued pursuant to Rule 10.2 by the
INTERNATIONAL DEPOSITARY AUTHORITY
identified at the bottom of this page

I. DEPOSITOR	II. IDENTIFICATION OF THE MICROORGANISM
Name: The Oriental Scientific Instruments, Import and Export Address: Corp. for Inst. of Microbiology Academia Sinica 52 San-Li-He Rd. Beijing, P.R. China	Accession number given by the INTERNATIONAL DEPOSITARY AUTHORITY: DSM 4025 Date of the deposit or the transfer[1]: 1987-03-17

III. VIABILITY STATEMENT

The viability of the microorganism identified under II above was tested on 2003-08-13 [2].
On that date, the said microorganism was

(X)[3] viable

( )[3] no longer viable

IV. CONDITIONS UNDER WHICH THE VIABILITY TEST HAS BEEN PERFORMED[4]

V. INTERNATIONAL DEPOSITARY AUTHORITY

Name: DSMZ-DEUTSCHE SAMMLUNG VON MIKROORGANISMEN UND ZELLKULTUREN GmbH Address: Mascheroder Weg 1b D-38124 Braunschweig	Signature(s) of person(s) having the power to represent the International Depositary Authority or of authorized official(s): U. Weiss Date: 2003-08-15

[1] Indicate the date of original deposit or, where a new deposit or a transfer has been made, the most recent relevant date (date of the new deposit or date of the transfer).
[2] In the cases referred to in Rule 10.2(a) (ii) and (iii), refer to the most recent viability test.
[3] Mark with a cross the applicable box.
[4] Fill in if the information has been requested and if the results of the test were negative.

1. (Amended) A process for producing vitamin C from L-sorbosone which comprises contacting L-sorbosone with a purified L-sorbosone dehydrogenase having the following physico-chemical properties:
a) Molecular weight: 150,000 ± 6,000 Da or 230,000 ± 9,000 Da (consisting of 2 or 3 homologous subunits, each subunit having a molecular weight of 75,000 ± 3,000 Da)
b) Substrate specificity: active on aldehyde compounds
c) Cofactors: pyrroloquinoline quinone and heme *c*
d) Optimum pH: 6.4 to 8.2 for the production of vitamin C from L-sorbosone
e) Inhibitors: Co^{2+}, Cu^{2+}, Fe^{2+}, Ni^{2+}, Zn^{2+}, monoiodoacetate and ethylenediamine tetraacetic acid,
wherein the conversion of L-sorbosone to vitamin C is catalyzed by the purified L-sorbosone dehydrogenase in the presence of an electron acceptor, and isolating the resulting vitamin C from the reaction mixture.

2. The process for producing vitamin C from L-sorbosone according to claim 1, wherein the L-sorbosone dehydrogenase is derived from the strain *Gluconobacter oxydans* DSM No. 4025 (FERM BP-3812), a microorganism belonging to the genus *Gluconobacter* having identifying characteristics to *G. oxydans* DSM 4025 (FERM BP-3812) or its mutants.

3. The process according to claims 1 and 2, wherein the reaction is carried out at pH values of about 6.4 to about 9.0 and at a temperature range from about 20°C to 60°C for about 0.5 to 48 hours.

4. The process according to any one of claims 1 and 2, wherein the reaction is carried out at pH values of about 7.0 to 8.2 and at a temperature range from about 20°C to 50°C for about 0.5 to 24 hours.

INTERNATIONAL SEARCH REPORT

PCT/EP 03/10495

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12P17/04 C12N9/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C12P C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, PAJ, BIOSIS, FSTA, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
E	WO 03 104445 A (ROCHE VITAMINS AG ;SUGISAWA TERUHIDE (JP); MIYAZAKI TARO (JP); HOS) 18 December 2003 (2003-12-18) claims 1-13 ---	1-4
E	WO 03 089634 A (ROCHE VITAMINS AG ;SUGISAWA TERUHIDE (CH); MIYAZAKI TARO (JP); HOS) 30 October 2003 (2003-10-30) claims 1-13 ---	1-4
X	EP 0 922 759 A (HOFFMANN LA ROCHE) 16 June 1999 (1999-06-16) cited in the application the whole document ---	1-4
A	EP 0 518 136 A (HOFFMANN LA ROCHE) 16 December 1992 (1992-12-16) example 7 ---	1-4

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[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
9 February 2004	17/02/2004

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Devijver, K

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 832 974 A (HOFFMANN LA ROCHE) 1 April 1998 (1998-04-01) claim 19	1-4
A	GB 466 548 A (TADEUS REICHSTEIN) 31 May 1937 (1937-05-31) the whole document	1-4
A	LOEWUS M W ET AL: "Conversion of L-sorbosone to L-ascorbic acid by a NADP-dependent dehydrogenase in bean and spinach leaf" PLANT PHYSIOLOGY, AMERICAN SOCIETY OF PLANT PHYSIOLOGISTS, ROCKVILLE, MD, US, vol. 94, 1996, pages 1492-1495, XP002101863 ISSN: 0032-0889 the whole document	1-4
A	EP 1 026 257 A (HOFFMANN LA ROCHE) 9 August 2000 (2000-08-09) page 5, line 10 - line 14; claims 1-10	1-4

INTERNATIONAL SEARCH REPORT

PCT/EP 03/10495

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03104445 A	18-12-2003	WO 03104445 A1	18-12-2003
WO 03089634 A	30-10-2003	WO 03089634 A1	30-10-2003
EP 0922759 A	16-06-1999	EP 0922759 A2	16-06-1999
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